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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,200	10/01/2003	Katsuhiko Kemmochi	4666-019	9623

20575 7590 09/06/2006

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EXAMINER

DEGHAN, QUEENIE S

ART UNIT PAPER NUMBER

1731

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Interview Summary</b>	Application No.	Applicant(s)	
	10/677,200	KEMMOCHI ET AL.	
	Examiner	Art Unit	
	Queenie Dehghan	1731	

All participants (applicant, applicant's representative, PTO personnel):

(1) Queenie Dehghan.

(3) Alan McCollom.

(2) Steven Griffin.

(4) \_\_\_\_\_.

Date of Interview: 31 August 2006.

Type: a) ☒ Telephonic    b) ☐ Video Conference  
 c) ☐ Personal [copy given to: 1) ☐ applicant    2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes    e) ☒ No.  
 If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: 44, 52 and 86.

Identification of prior art discussed: Watanabe et al. (5,885,071).

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

  
 Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant's representative gave an overview of the application and the history of the parent application. The applicant's representative discussed the proposed amendment to the independent claims and inquired about the possibility of putting the amended claims into allowance. The Examiner responded that the proposed amendments would raise new issues and would need to perform a further search to determine its patentability. Furthermore, the Examiner indicated that the proposed amendment may appear to overcome the Watanabe et al. prior art, however, the proposed change may also be a new matter issue. Both the Examiner and Applicant's representative reiterated that the examination of the parent case bears no weight in the examination of the current application.

PTOL-413A (09-04)  
Approved for use through 07/31/2006, OMB 0851-0031  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

### Applicant Initiated Interview Request Form

Application No. 10/677,200 First Named Applicant: Kemmochi  
Examiner: Queenie Dehghan Art Unit: 1731 Status of Application: Under Final

#### Tentative Participants:

(1) Alan McCollom (2) SPE  
(3) Examiner Dehghan (4) \_\_\_\_\_

Proposed Date of Interview: 8/31/06 Proposed Time: 11:00 (AM/PM)  
EST

#### Type of Interview Requested:

(1) ☒ Telephonic (2) ☐ Personal (3) ☐ Video Conference

Exhibit To Be Shown or Demonstrated: ☐ YES ☒ NO  
If yes, provide brief description: \_\_\_\_\_

### Issues To Be Discussed

Issues (Rej., Obj., etc)	Claims/ Fig. #s	Prior Art	Discussed	Agreed	Not Agreed
(1) <u>Claims 44-59</u>	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(2) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(3) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(4) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Continuation Sheet Attached			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Brief Description of Arguments to be Presented: Similarity of claims 44 and 52 to  
allowed claims 1 and 17 in parent case and proposed amendments to claims  
44, 52, 53, 58, and 59 and new claim 86 (attached).

An interview was conducted on the above-identified application on \_\_\_\_\_.  
NOTE: This form should be completed by applicant and submitted to the examiner in advance of the interview (see MPEP § 713.01).

This application will not be delayed from issue because of applicant's failure to submit a written record of this interview. Therefore, applicant is advised to file a statement of the substance of this interview (37 CFR 1.133(b)) as soon as possible.

Alan T. McCollom  
Applicant/Applicant's Representative Signature

Alan T. McCollom

Typed/Printed Name of Applicant or Representative  
28,881

Registration Number, if applicable \_\_\_\_\_

\_\_\_\_\_  
Examiner/SPE Signature

This collection of information is required by 37 CFR 1.133. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

**PROPOSED AMENDMENT TO KEMMOCHI APPLICATION NO. 10/677,200****DO NOT ENTER**

1-43. (Cancelled)

44. (Currently amended) A method for making a silica glass crucible, comprising:  
introducing into a rotating crucible mold outer silica grain doped with aluminum to  
form an outer layer;

introducing into said mold bulk silica grain consisting essentially of quartz grain to  
form a bulky wall including a bottom wall and a side wall;

heating the interior of the mold; and

introducing into said mold inner silica grain doped with aluminum, wherein the heat  
fuses said outer and bulk silica grains and at least partially melts said inner silica grain and  
fuses said at least partially molten inner silica grain to the bulk wall to form an innermost  
layer having a thickness of .2mm to less than .5mm.

45. (Previously presented) The method of claim 44, further comprising cooling  
the fused silica grains so as to form within the inner layer a plurality of nuclei of crystalline  
silica.

46. (Previously presented) The method of claim 45, wherein cooling comprises  
maintaining the crucible in the range of 400-600°C for approximately 25 minute.

47. (Previously presented) The method of claim 45, wherein cooling comprises  
maintaining the crucible in the range of 1400-1600°C for approximately one minute.

48. (Previously presented) The method of claim 44, wherein the outer layer is formed substantially on the side wall.

49. Canceled.

50. (Previously presented) The method of claim 44, wherein the inner silica grain is doped with aluminum in the range of 50–500ppm.

51. (Previously presented) The method of claim 44, wherein the outer silica grain is doped with aluminum in the range of 100–500ppm.

52. (Previously presented) A method for making a silica glass crucible, comprising:

introducing into a rotating crucible mold bulk silica grain consisting essentially of pure silica grain to form a bulk grain wall having a bottom wall and a side wall;

heating the interior of the mold;

introducing into said mold inner silica grain doped with aluminum, wherein the heat fuses said bulk silica grain and at least partially melts said inner silica grain and fuses said at least partially molten inner silica grain to the bulk grain wall to form a homogeneously aluminum-doped innermost layer having a depth in the range of .2mm to less than .5mm and being homogeneously doped with aluminum in the range of about 50-500ppm.

53. (Previously presented) The method of claim 52, further comprising cooling so as to form within the innermost layer a plurality of nuclei of crystalline silica.

54. (Previously presented) The method of claim 53, wherein cooling comprises maintaining the crucible in the range of 400-600°C for approximately 25 minute.

55. (Previously presented) The method of claim 53, wherein cooling comprises maintaining the crucible in the range of 1400-1600°C for approximately one minute.

56. Canceled.

57. Canceled.

58. (Previously presented) The method of claim 52, wherein the innermost layer is doped with aluminum in the range of about 80-160ppm.

59. (Previously presented) The method of claim 52, wherein the innermost layer is doped with aluminum in the range of about 100-120ppm.

60-85. (Cancelled)

86. (New) The method of claim 44 wherein introducing into said mold inner silica grain doped with aluminum further comprises introducing into said mold inner silica grain homogenously doped with aluminum, wherein the heat fuses said outer and bulk silica grains and at least partially melts said homogenously doped inner silica grain and fuses said at least partially molten homogenously doped inner silica grain to the bulk wall to form an homogenously doped innermost layer having a thickness of .2mm to less than .5mm.



Allowed claim 1 from the parent application:

1. A crucible comprising:  
a crucible wall including a bottom wall and side wall;  
an aluminum-doped inner layer formed on an inner portion  
of said crucible wall, said inner layer having a thickness in the  
range of 0.2mm to less than 0.5mm; and  
an aluminum-doped outer layer formed on an outer portion  
of said crucible wall.

Allowed claim 17 from the parent application:

17. A silica glass crucible, comprising:  
a crucible wall including a bottom wall and a side wall;  
an interior cavity defined by said crucible wall; and  
an inner layer formed on the innermost portion of said  
crucible wall;  
wherein said inner layer has a depth in the range of from  
0.2mm to less than 0.5mm and is homogeneously doped with  
aluminum in the range of about 50–500ppm.